DVQ-2, DMR8RT, DMR16RT

QUICK-START GUIDE

IMPORTANT!!!

PLEASE READ BEFORE OPERATING YOUR DVR

Ready to go, right out of the box!

This digital video recorder is designed to function right out of the box. We made setting up your DVR easier by adjusting the time, date and record settings for you. Your DVR is set to record for 14 days with the video quality and frame rate set to the highest settings for 14 days of recording.

Trouble Shooting

Inside this quick-start guide are easy to use techniques for the following symptoms:

- Not showing video, follow the steps 1 - 5 below in this manual.
- HDD (Hard drive) error messages follow the steps 1 - 5 below in this manual.
- HDD not found, follow the steps 1 - 5 below in this manual.
- All video camera images are distorted, follow the steps 1 - 5 below in this manual.
- DVR will not record; follow the steps 1 - 5 below in this manual.
- DVR is not showing proper date & time, follow step 3 below in this manual.

Networking your DVR

View video from your PC anywhere in the world by connecting your DVR LAN connection to your network system. See Networking on page 8.

Advance Settings

If you need to adjust recording time, frame rate or quality refer to the main user manual also included with this DVR.

Quick-Start Guide Contents

Also, in this quick-start guide is instructions on how to do the following:

1. Run Factory Default ……..p 5
2. Set up Proper Time & Date…...p 6
3. Clear Hard Drive…… p 6
4. Set up OVERWRITE Function...p 7
5. Networking your DVR……..p 8

NOTE: After running the above settings, please refer to **RECORD SETTINGS** in your user manual.

Optimizing Your DVR

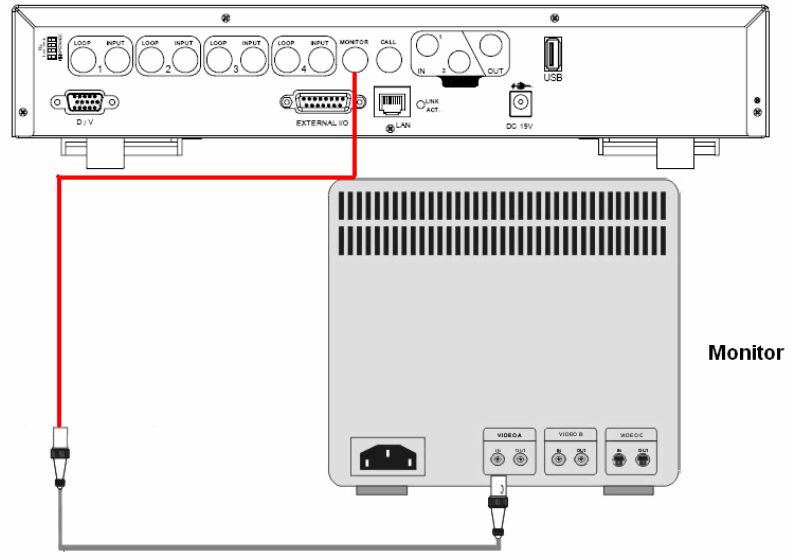
1. It is important that you setup your DVR to meet your needs. Key points of consideration include: recording time, frames per second, naming your cameras, and setting motion detection. Please see your user's manual for detailed set-up instructions.

DON'T FORGET: Supercircuits offers FREE lifetime tech support on every product we sell.

1. Please follow the steps below to repair YOUR DVR

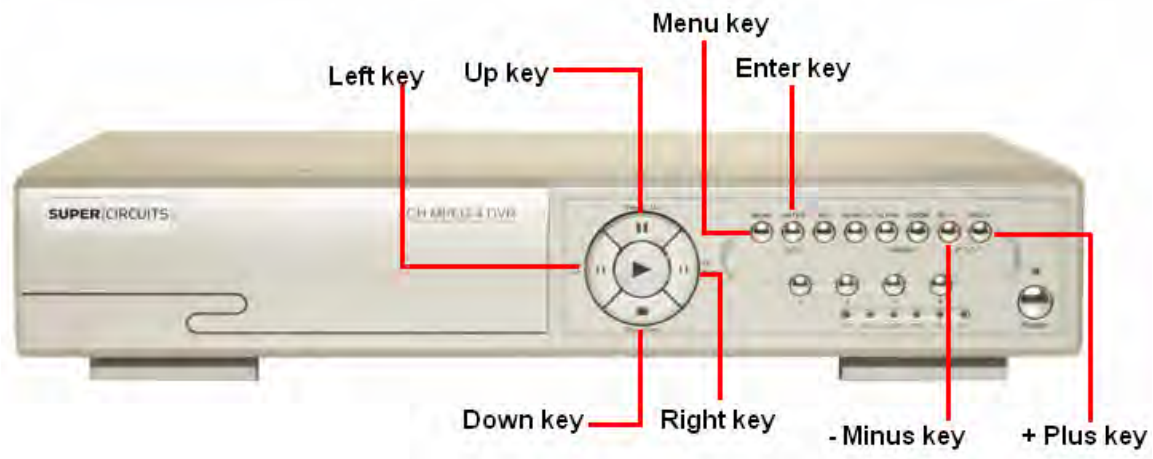
1. Connect your monitor to the DVR **monitor** output jack. The back of your DVR could be different from the below diagram.

DVR Monitor Installation

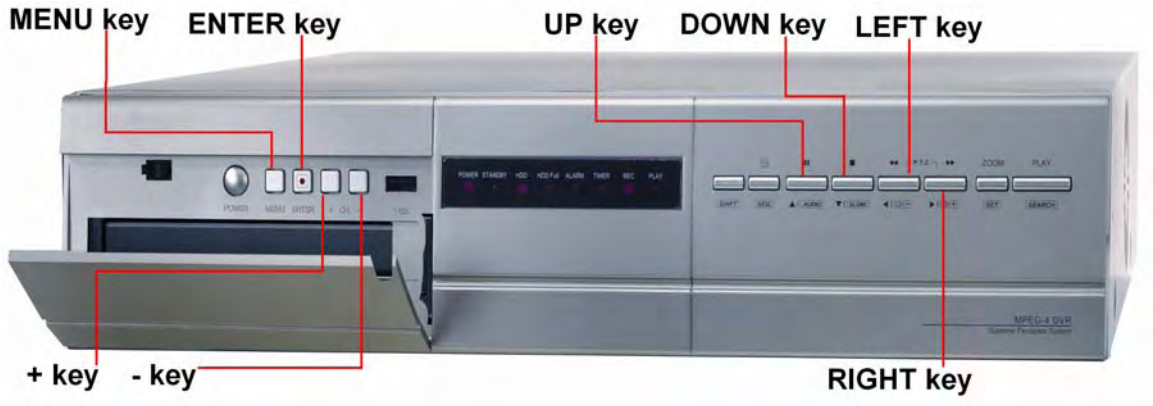


Turn your DVR on and press the "**MENU**" key on the front panel to enter the main menu list. The Menu allows you to configure your DMR settings.

DVQ-2



DMR- 8 & 16 RT



The DVR will ask you for a password.

The password screen will appear:

Password: 0000

The default admin password is **0000**. Enter the default password, and press the "**ENTER**" key.
Note: If you get a message "Password Error", you have entered an incorrect password.

- **Up** and **Down** keys: Scroll up and down.
- **Left** and **Right** keys: Scroll left to right within a menu option.
- **ENTER:** Selects a submenu / an option under a submenu for browsing / modification
- **MENU:** Completes modification of a menu option; exits a menu.
- **+** Plus and **–** Minus keys are used to change values.

MAIN MENU

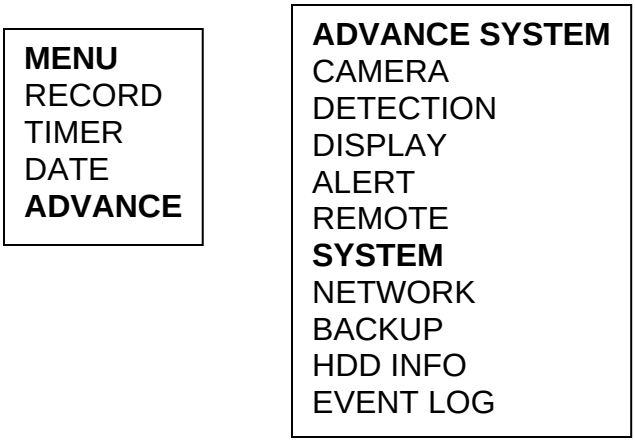
There are 4 options available in the Main Menu:

MENU
RECORD
TIMER
DATE
ADVANCE

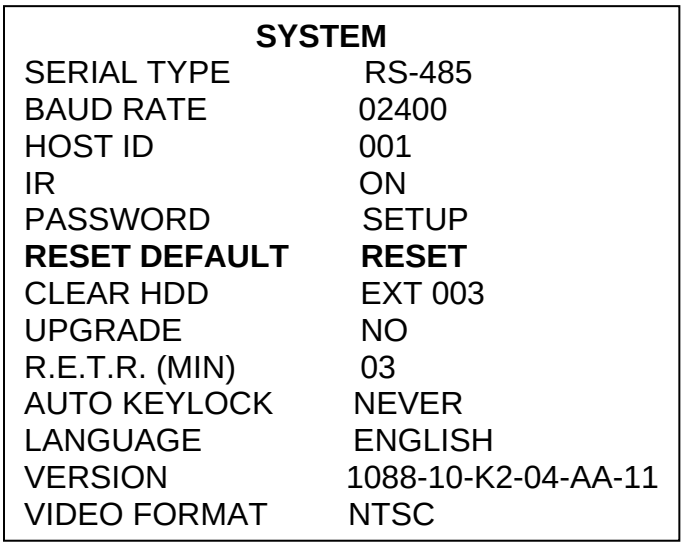
2. RUN FACTORY DEFAULT

SYSTEM RESET

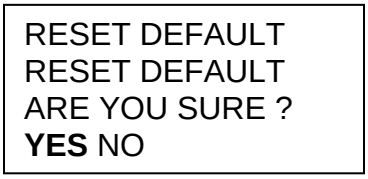
Go down to **ADVANCE** and hit the **>ENTER** key, select **SYSTEM** and hit the **ENTER** key.



Select **RESET DEFAULT** and > hit the **ENTER** key.



You will see a **RESET DEFAULT** dialog box. Reset all system settings to factory default settings. Change the **NO** option to **YES** by hitting the **>LEFT** ◄ arrow key and hitting the **ENTER** key**.**

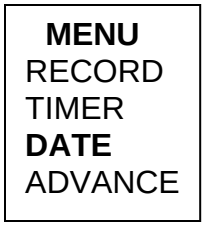


Wait for 1 to 2 minutes and you will see a **REBOOT** dialog box and the system will reinitialize.

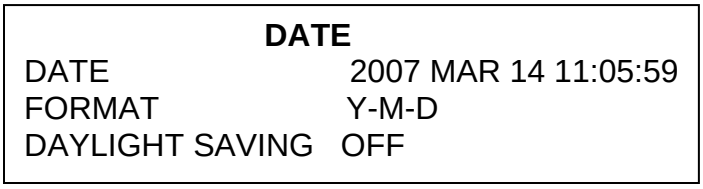
Go back to the main **MENU** and select **DATE**.

3. TIME/ DATE SETUP

Set up the DVQ system time by selecting **DATE** in main **MENU** and hit the **Enter key**.



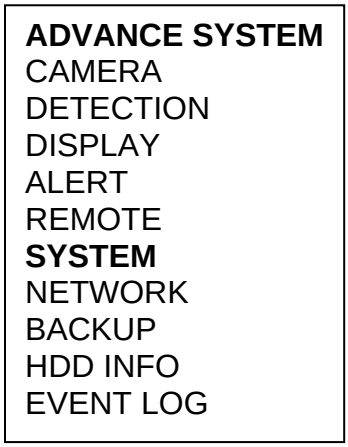
You will see your TIME/DATE settings, enter correct date and time.



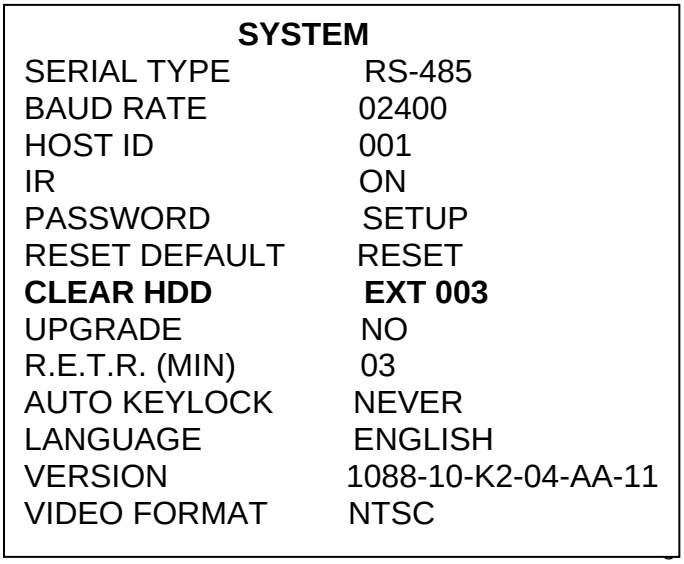
Hit **>MENU** key once to exit and move on to **CLEAR HDD**.

4. CLEAR HDD

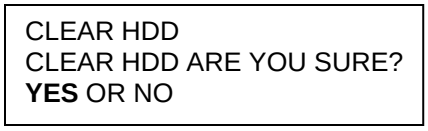
Select **ADVANCE** from main **MENU,** hit the **>ENTER key** and scroll down to **SYSTEM** and hit the **>ENTER key**.



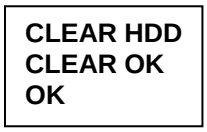
Scroll down to **CLEAR HDD** and hit the **>ENTER** key.



You will see a dialog box with **"CLEAR HDD ARE YOU SURE? YES OR NO"**. Hit the **LEFT** key to select **YES** and hit the **>ENTER** key.



You will see another dialog box asking for confirmation "**CLEAR HDD CLEAR OK** " hit the **ENTER** key. This option will delete all the contents of your HDD.

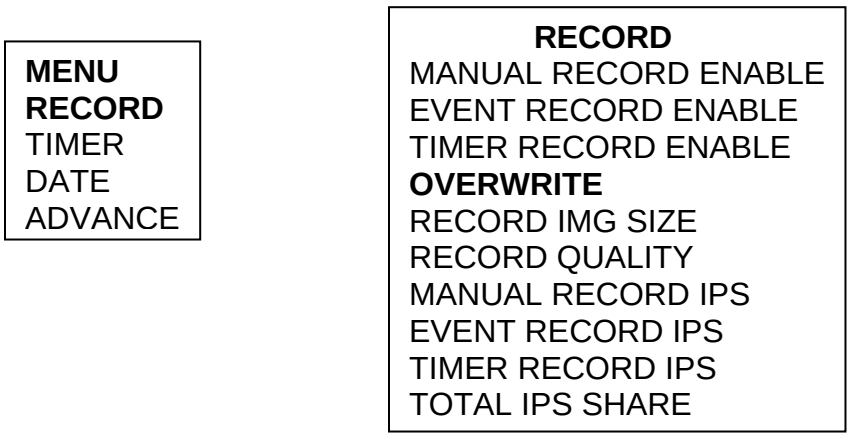


You will be back to the **SYSTEM** menu after clearing the HDD. Hit the **MENU** key twice to exit **SYSTEM** and **ADVANCE** sub menus. Scroll up to the **RECORD** menu option to setup your **OVERWRITE** setting.

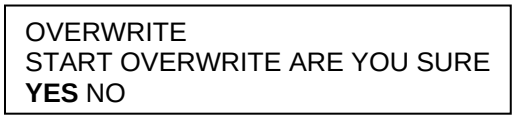
5. Setup OVERWRITE function

HDD OVERWRITE

Select **RECORD** in the main **MENU** and Scroll down to **OVERWRITE** and hit the **ENTER** or **–** minus or **+** plus key to enter **OVERWRITE** function.



You will see a dialog box wanting confirmation "**START OVERWRITE ARE YOU SURE, YES NO**, select **YES** and hit the **>ENTER** key.



NOTE: In OVERWRITE RECORDING mode, over writing of previous files will occur when the hard drive is full.

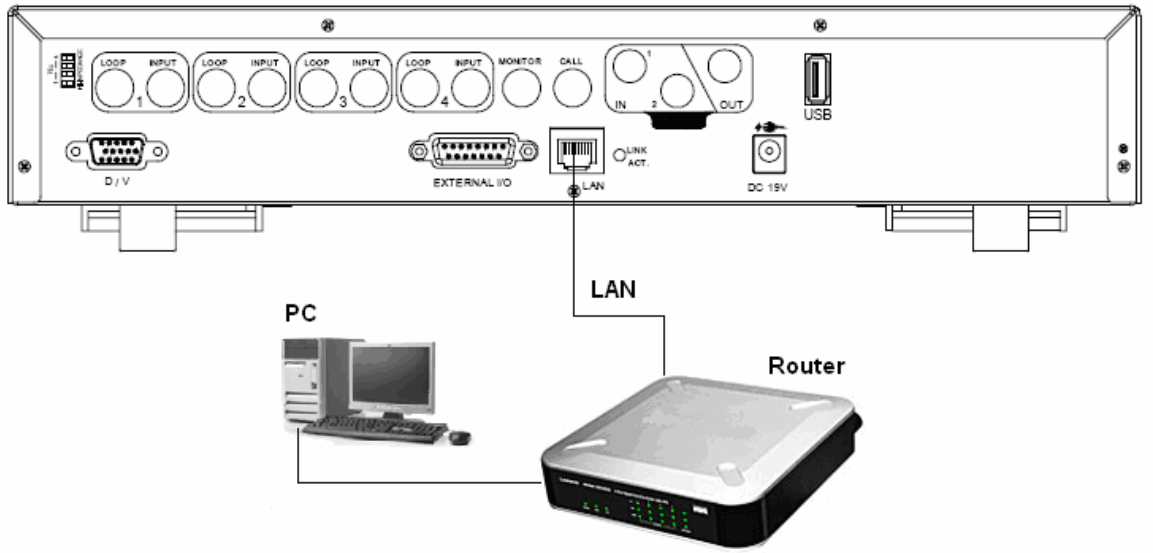
Hit the **MENU** key twice to exit the menu settings. Turn your DVR off by hitting the **>POWER** button and unplugging the DVR for about 15 to 20 sec's. Turn the unit on and your ready to start installing and configuring the rest of your system.

NETWORKING

View video from your PC anywhere in the world by connecting your DVR LAN connection to your network system.

Things to do before networking your DVR

1. Connect DVR LAN connection to your LAN router.



2. To connect to the world wide area network for remote viewing you **must configure your router to allow port forwarding.** Super Circuits does not provide technical support for router setup. Contact your service provider/router manufacturer for support on setting up port forwarding. Use port number **8000**.

3. Do you have a dynamic or static IP address? Note: Static IP address is highly recommended, because of the video connection reliability. Call your IP provider about setting up a static IP address for your DVR.

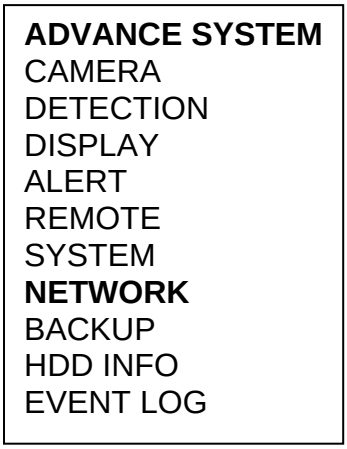
4. Make sure you have DirectX version 9.0c on your computer. If not go to www.microsoft.com/directx

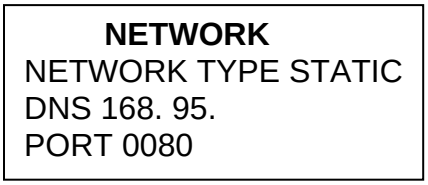
5. Make sure that you have the following information from your IP provider or IT department:

   A. IP address.
   B. Subnet Mask.
   C. Default Gateway.
   D. If there is a DNS number.
   E. If DHCP settings are allowed set your DVR to "**Manual**" not "**Automatic**".
   G. Next verify your IP address *(for your domain)* by going to www.whatismyip.com. This is the IP address you will use to log in remotely

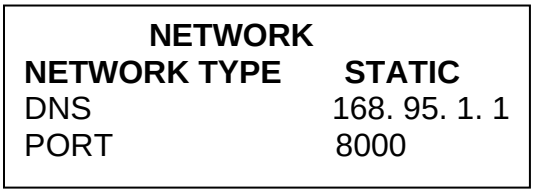
Setting up your DVR for networking

6. Access your DVR network settings by going to **MENU / ADVANCE/ NETWORK.** Set **IP ADDRESS, GATEWAY, NETMASK** and **WEB PORT.**

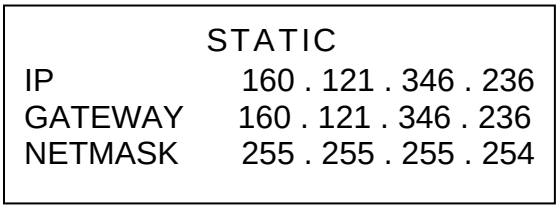




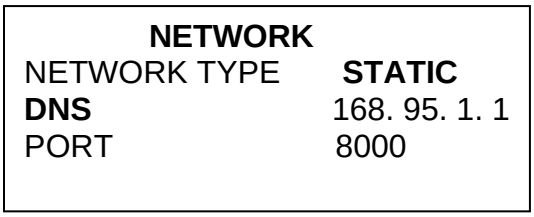
7. Change **NETWORK TYPE** to **STATIC** by hitting the **+** plus or **–** minus keys and hit the **ENTER** key.



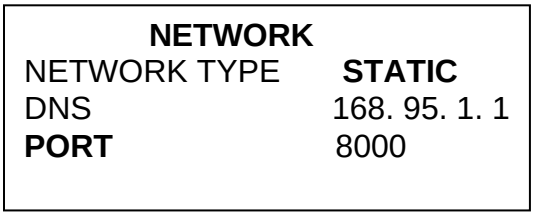
8. Enter your IP, Gateway and Netmask and hit the **MENU** key to exit **STATIC** menu.



9. In **NETWORK** menu select **DNS** and enter IP address of the domain server obtained from your ISP (Internet Service Provider).



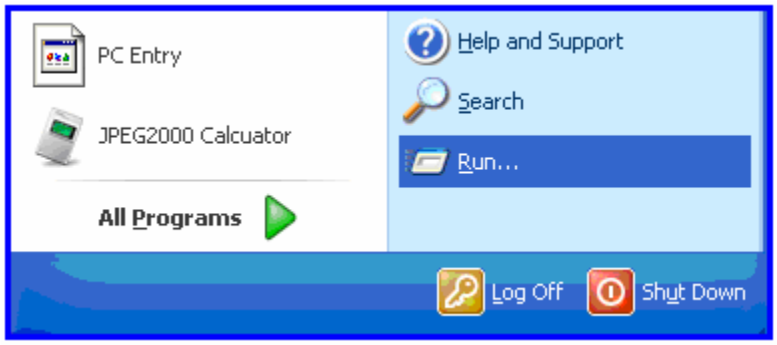
10. Select PORT and enter 8000 and exit NETWORK menu.



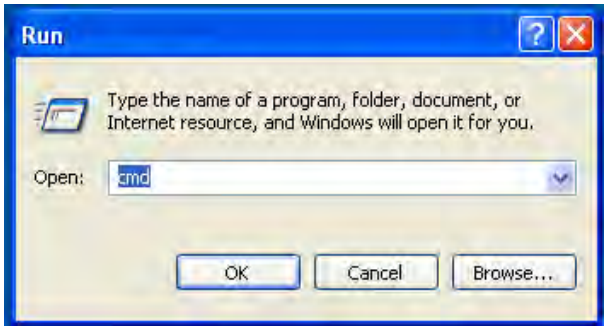
11. Exit all menus and turn your DVR off by hitting the power key and holding for about 3 seconds.

Test your connection

12. Return to your computer: go to the PC start menu and select "**Run**"

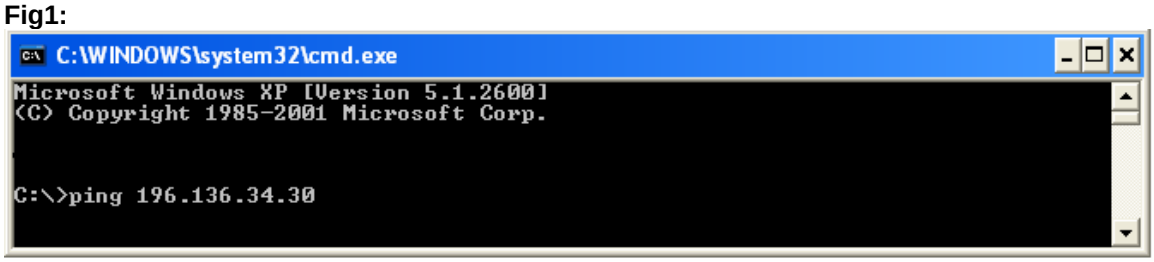


13. Type **"cmd"** and click "OK".



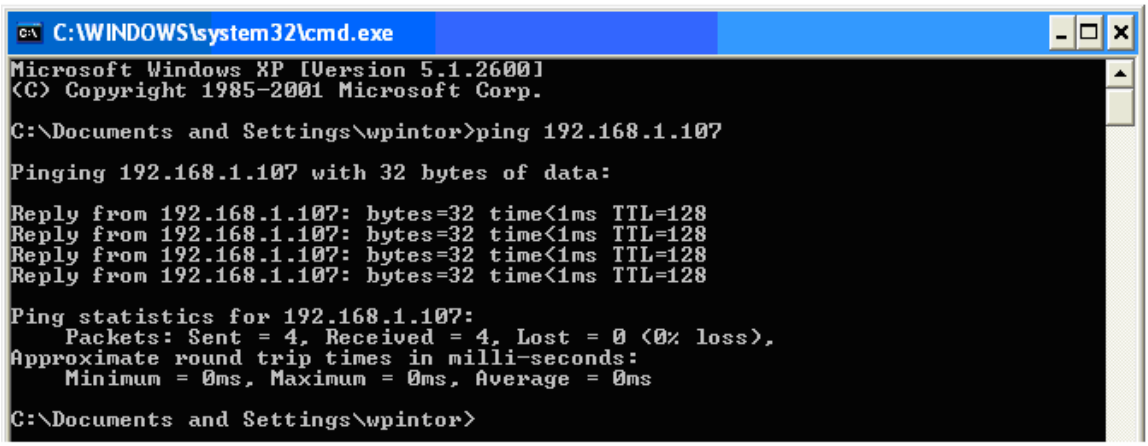
14. A black box will pop up with a "C" prompt. After the "C" prompt type **"ping"** at the dos prompt, space bar and the **IP address of the DVR** and then click "**>ENTER.**

Fig1:



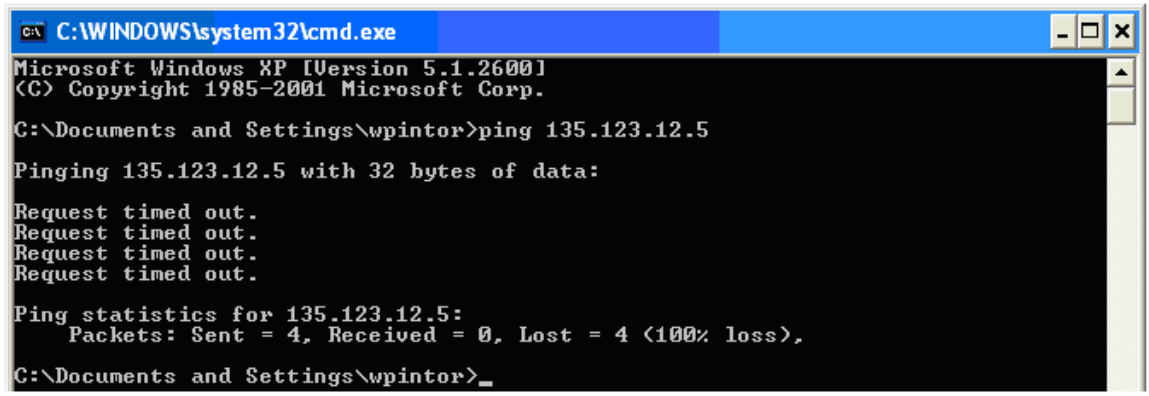
15. A box will pop up and it will display "reply from" the IP address 3 to 4 times. You will also see "Packets sent = X, Received = X and Lost = X. This will tell you that, you've successfully connected to your DVR and we can proceed. Like **FIG.2** below.

FIG.2


C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.
C:\Documents and Settings\wpintor>ping 192.168.1.107
Pinging 192.168.1.107 with 32 bytes of data:
Reply from 192.168.1.107: bytes=32 time<1ms TTL=128
Reply from 192.168.1.107: bytes=32 time<1ms TTL=128
Reply from 192.168.1.107: bytes=32 time<1ms TTL=128
Reply from 192.168.1.107: bytes=32 time<1ms TTL=128
Ping statistics for 192.168.1.107:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\Documents and Settings\wpintor>

If you're seeing "**Request timed out**" and "Packets: Sent X, Received = X, Lost = X" like **FIG.3** below, then you have not established a LAN connection between the DVR and the computer. You will need to recheck all DVR network settings above, check with IP provider or IT department, router settings. Make sure cables are good, and connected.

FIG.3


C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.
C:\Documents and Settings\wpintor>ping 135.123.12.5
Pinging 135.123.12.5 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.
Ping statistics for 135.123.12.5:
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\Documents and Settings\wpintor>_

This could also be due to a bad cable between the DVR and router or bad DVR *Network Interface Controller (NIC).* Check the Ethernet cable connection on the back of the DVR and check for green lights and that they blink when you "ping" the DVR. If it is not blinking, this could indicate that the DVR's network interface card is bad and call us for tech support. If green light is blinking, as a final check, connect the DVR **directly** to the computer using an Ethernet "**crossover cable**" *(which is available at any electronics store such as Radio Shack, or Best Buy, Circuit City, etc…)* eliminating all other cables and equipment. Crossover cables are only used for testing purposes. And repeat the pinging process. If after connecting the crossover cable and you are successful in pinging your DVR, the problem is with your router, cables or the IP address. Check with your IP provider, check your cables and make sure your router is configured for port forwarding. If you're not successful in pinging your DVR call Supercircuits for technical help.

16. If you're looking at **FIG.2** then you have demonstrated that a Local Area Connection (LAN) has been made between the DVR and the computer. Proceed to Software installation.

17. Install the CD that came with your DVR into the PC and install **Video Web Server.**

18. Double click **Video Web Server** " " Icon enter **User Name**, **Password**, **IP address** and **Port 8000** and hit **OK**.

NOTE: Factory default user name is **ADMIN**, Password is **ADMIN**.

Who to Contact

If you have any further questions setting up your DVR, or are experiencing any issues with your DVR, please contact our dedicated technical support experts at:

Technical Support: **800-335-9777** Press 3 for Technical Support
Hours of Operation: Monday thru Saturday: 9am-5pm

QUICK START

16 / 8 / 4 CH Real Time MPEG-4 Network DVR

4CH

16CH / 8CH / 4CH

16CH / 8CH / 4CH Built-in DVD-RW Writer or CD-RW Writer

1 Make Sure Your Package Contains :

MODEL	16CH	8CH	4CH	16CH / 8CH / 4CH DVD-RW / CD-RW
Digital Video Recorder	V	V	V	V
Adapter	V	V	V	V
Licensed Software AP	V	V	V	V
IR Transmitter and IR Receiver	V	V	Optional	V
Power and Data Bus	V	V	V	V
DSUB PIN Connector	V	V	V	V
Screws	V	V	V	V

Please read instructions thoroughly before operation and retain it for future reference.

2 Install HDD :

- **16CH / 8CH**
- **16CH (D) / 8CH (D) / 4CH (D)**

Carefully follow the steps to ensure correct installation.

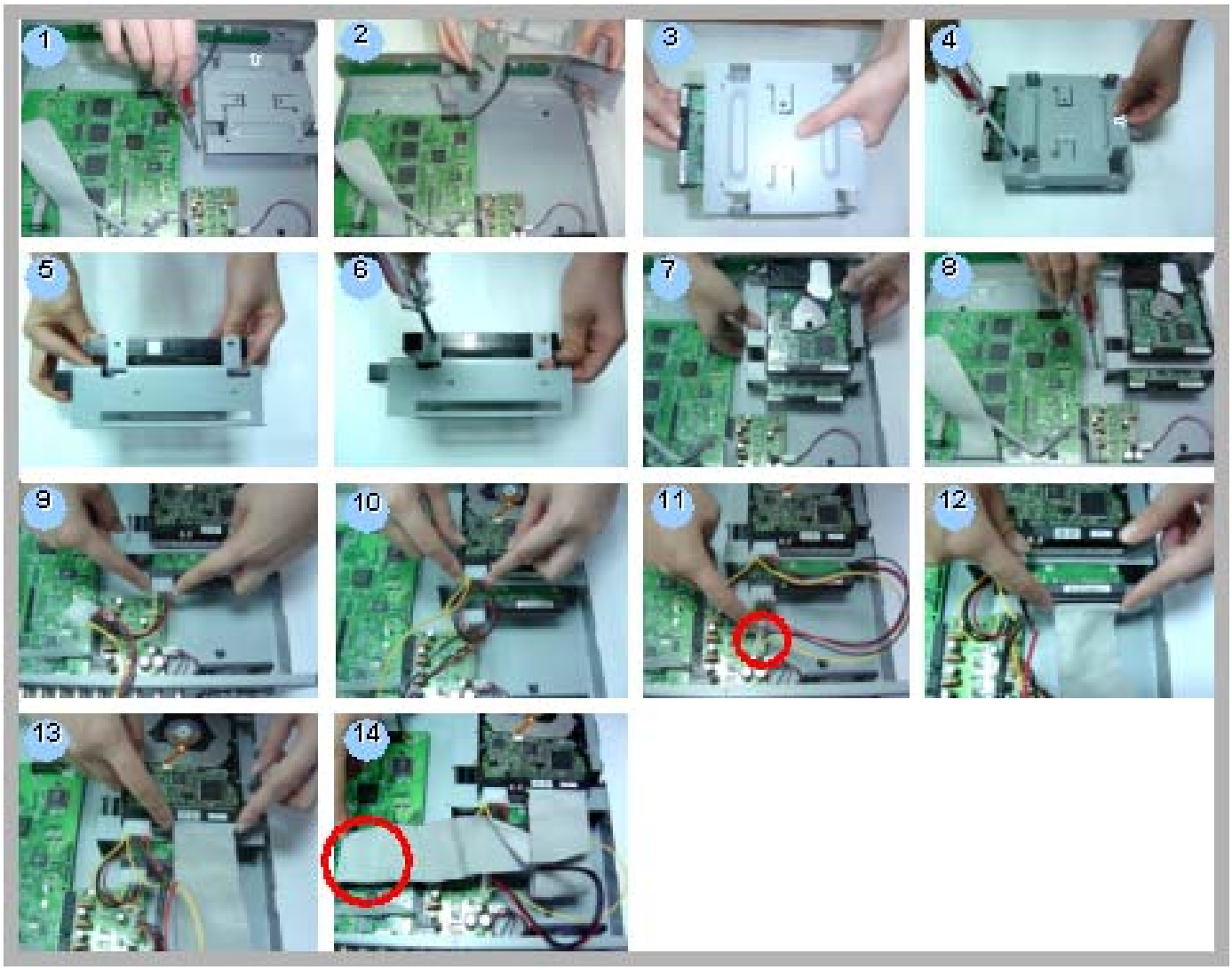
*** Note: If you want to install two HDDs, please set one HDD to “Master Mode” or “Single Mode”, and the other one to “Slave Mode”. ***

1) Open the upper cover of the DVR and screw out the bracket. 1 ~ 2

2) Screw HDD to the HDD bracket. 3 ~ 8

3) Connect the HDD to the power connector and IDE BUS (make sure to align the HDD precisely to the pin connection). 9 ~ 14

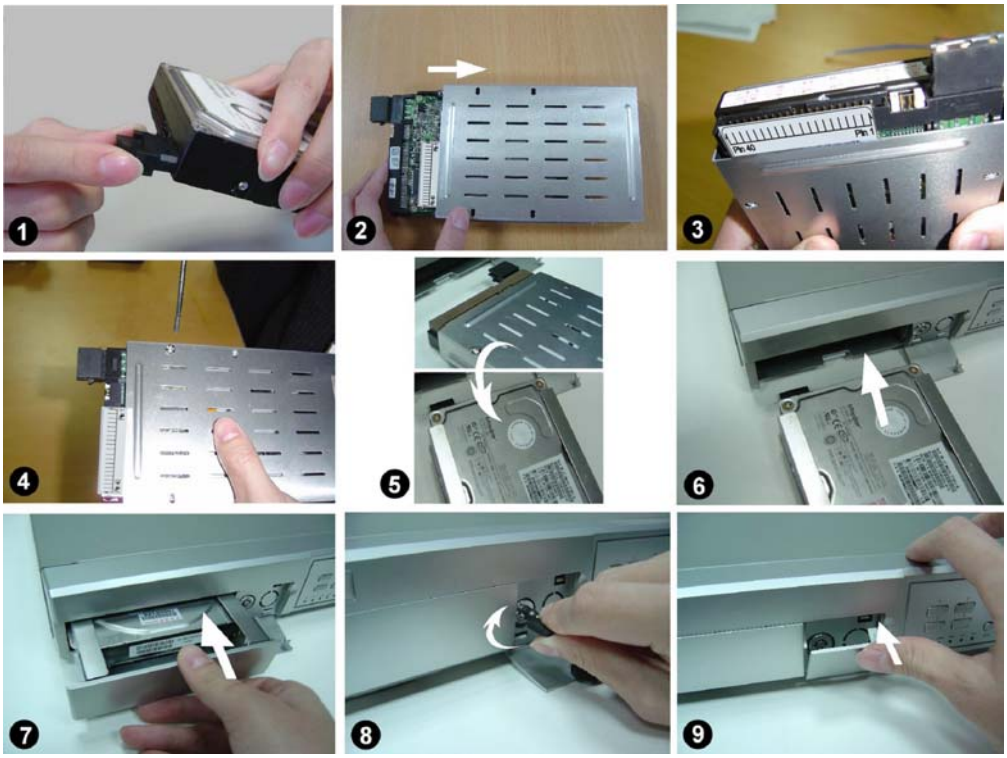
4) Close the upper cover of the DVR.



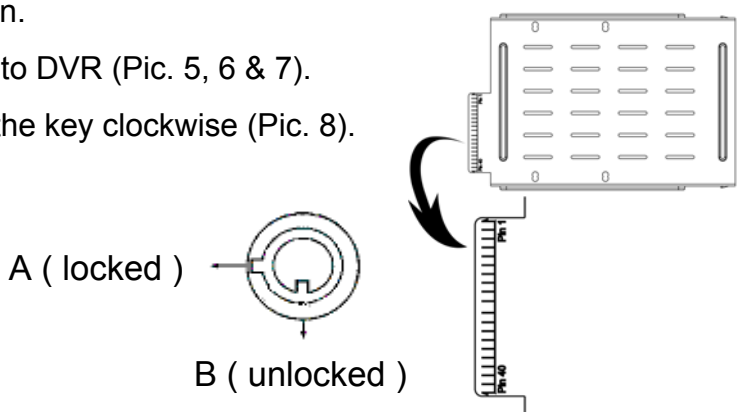
- **4CH**

Carefully follow the steps to ensure correct installation.

*** Note: Please set one HDD to “Master Mode” or “Single Mode” ***



- **Step 1** Connect the connector with the HDD (Pic. 1).
- **Step 2** Put HDD into the HDD cartridge with the pins facing outside (Pic. 2).
- **Step 3** Fasten the HDD to the cartridge. Before you fasten the HDD, please be aware that you must to align the pins of the HDD with the pin marks of the cartridge. Then fasten the HDD correctly (Pic. 3 & 4). You must precisely align the hard disk to the pin connection to ensure correct installation.
- **Step 4** Reverse the HDD and put it into DVR (Pic. 5, 6 & 7).
- **Step 5** Lock the HDD slot by turning the key clockwise (Pic. 8).

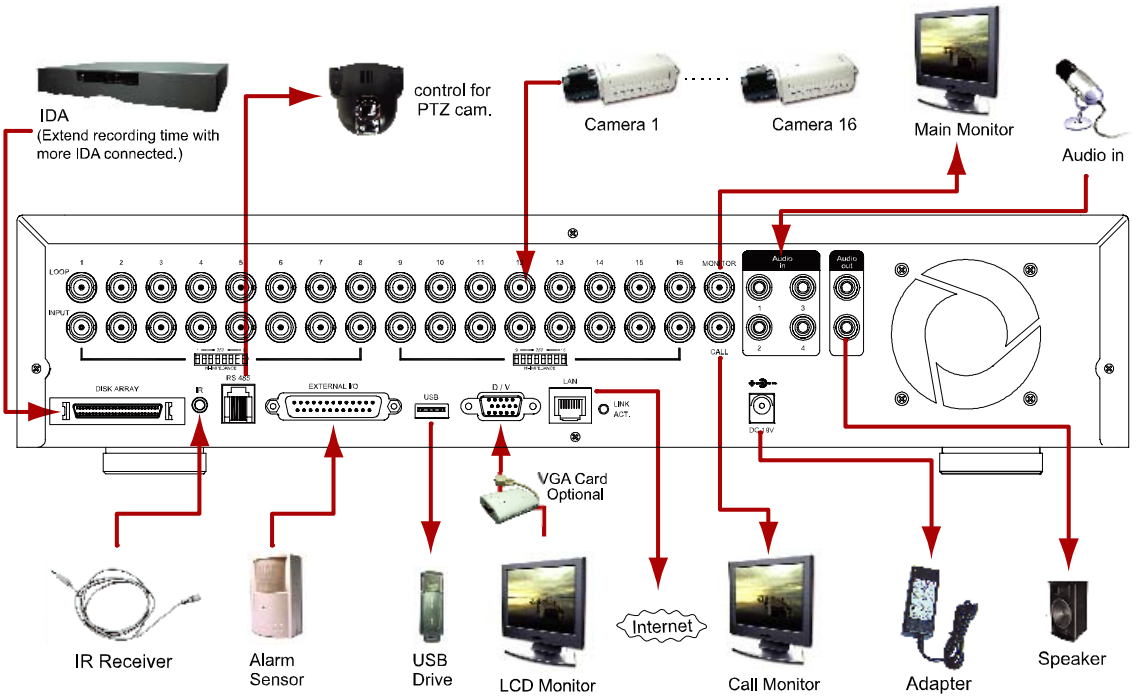


Note : If you do not lock the HDD cartridge the DVR system will not function properly.

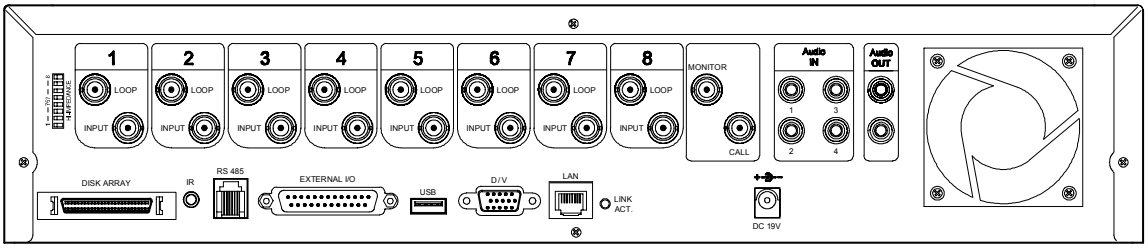
- **Step 6** Close the cap (Pic. 9).

3 Physical Connections :

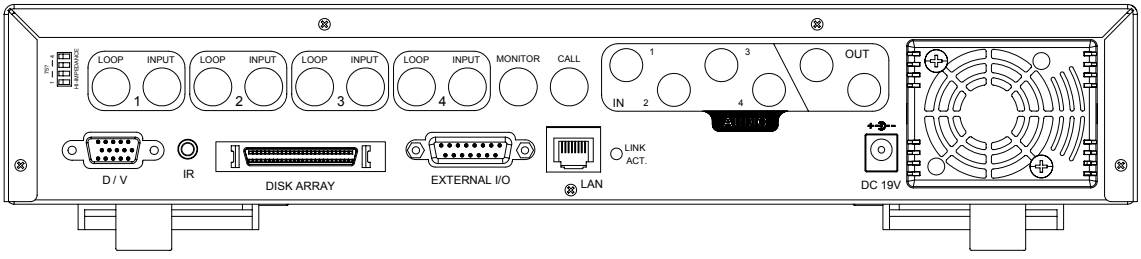
- **Take 16CH / 16CH (D) as an example**



- **8CH / 8CH (D)**



- **4CH / 4CH (D)**



4 System Time Setup :

Before using this unit, please set up the system time first in order to process the functions correctly.

→ Press “MENU” button to enter menu list

→ Enter the default password “0000” to unlock keys

→ Go to “DATE” menu and set the date

→ Press “＋” or “－” button to set the correct time of the DVR

→ If users would like to activate the daylight saving function, please turn the daylight saving function “ON” and press “ENTER” button to enter the daylight saving setting page.

→ After setting, please press ” MENU ” to exit

DATE	
DATE	2006-MAR-28 14:30:00
FORMAT	Y-M-D
DAYLIGHT SAVING	ON

DAYLIGHT SAVING	
ON	4TH-SUN-MAR 01: 00: 00
OFF	4TH-SUN-OCT 01: 00: 00
ADJUST	01 : 00

NOTE: The illustrated setting means: During the daylight saving time period (start from the 4th Sunday of March, end on the 4th Sunday of October), the DVR system time will plus one hour.

5 Record & Playback :

Record:

- *16CH / 8CH:* **“RECORD”**
- *16CH (D) / 8CH (D) / 4CH (D):* **“RECORD”**
- *4CH:* **“REC”**

RECORD
MANUAL RECORD ENABLE
EVENT RECORD ENABLE
TIMER RECORD ENABLE
OVERWRITE
RECORD IMG SIZE
RECORD QUALITY
MANUAL RECORD IPS
EVENT RECORD IPS
TIMER RECORD IPS
TOTAL IPS SHARE

Playback:

Press " PLAY " button, and the DVR will playback the last recorded video.

- FAST FORWARD (F.F.) & FAST REWIND (REW) : ▶▶ ◀◀
- PAUSE / IMAGE JOG: ▮▮
- STOP: ■
- CHANNEL SHIFT
  (Display Mode, Full Screen Switch, and Channel Display Switch)
  - *16CH / 8CH:* **"SHIFT" + "SET"**
  - *16CH (D) / 8CH (D) / 4CH (D):* **"SHIFT" + "SET"**
  - *4CH:* **"SET"**
- SLOW PLAYBACK
  - *16CH / 8CH:* **"SHIFT" + "SLOW"**
  - *16CH (D) / 8CH (D) / 4CH (D):* **"SHIFT" + "SLOW"**
  - *4CH:* **"SLOW"**
- AUDIO
  - *16CH / 8CH:* **"SHIFT" + "AUDIO"**
  - *16CH (D) / 8CH (D) / 4CH (D):* **"SHIFT" + "AUDIO"**
  - *4CH:* "

 "

6 Backup :

USB BACKUP~ FOR 16CH / 8CH / 4CH and 16CH (D) / 8CH (D) / 4CH (D)

BACKUP
USB BACKUP

USB BACKUP				
START TIME	2006-05-12 16 : 00 : 00			
END TIME	2006-05-12 21 : 00 : 00			
AVAILABLE SIZE	0512 MB			
CHANNEL	● 01	● 02	X 03	X 04
	X 05	X 06	X 07	X 08
	X 09	X 10	X 11	X 12
	X 13	X 14	X 15	X 16
HDD NUM	MASTER			
BACKUP TO USB	START			

DISK BACKUP ~ FOR 16CH (D) / 8CH (D) / 4CH (D)

Go to “MENU” → “ADVANCE” → “BACKUP”, and press ”ENTER”. The screen will show the following options:

BACKUP
USB BACKUP
DISK BACKUP

Select “DISK BACKUP” and press “ENTER”.

DISK BACKUP				
START TIME	2006-05-12 16 : 00 : 00			
END TIME	2006-05-12 21 : 00 : 00			
AVAILABLE SIZE	4083 MB			
CHANNEL	● 01	● 02	X 03	X 04
	X 05	X 06	X 07	X 08
	X 09	X 10	X 11	X 12
	X 13	X 14	X 15	X 16
HDD NUM	MASTER			
BACKUP TO DISK	START			

1) Press “＋” and “－” buttons to open the **DVD / CD WRITER**.
Put the **DISK** into **DVD / CD WRITER**, and press “＋” and “－” buttons again to close.
(NOTE: Use DVD-R DISK only)

2) Go to “DISK BACKUP” menu and set the start time, end time, channels and HDD number.
Note:
Select channels by pressing “ENTER” button to change the symbol in front of the channel number.
Symbol “X” means that this channel is not selected.
Symbol “●” means that this channel is selected.

Only 4 channels support audio backup. If you want to backup images with audio, please connect the camera to the correct channels.
16CH / 16CH(D) models: CH13, CH14 , CH15 and CH16
8CH / 8CH(D) models: CH5, CH6, CH7 and CH8
4CH / 4CH(D) models: CH1, CH2, CH3 and CH4

3) After setting up the backup information, move the cursor to “START”, and press “ENTER”.
While the files are backing up to **DISK**, users will see the backup completed percentage on the screen.

4) After backup files to **DISK**, “DISK BURN FINISH” message will be prompted on the screen.
Press “＋” and “－” to eject the **DISK** from **DVD / CD WRITER**.

5) Put **DISK** into the **DVD / CD -ROM** of your PC.
(O/S system: Windows XP and Windows2000).
And then double click the file → Convert the file
→ Play the backup file at PC side.

NOTE: The maximum number of backup files in the disk is 41.

For detailed instructions, please refer to P.36 of the user’s manual.

7 Network Setup

There are two ways to make network setup: via your DVR locally or via the licensed AP interface.

◆ **Via DVR**

Go to “MENU” → “ADVANCE” → “NETWORK”, and you will see a network setup screen as follows:

NETWORK	
NETWORK TYPE	STATIC
DNS	168. 95. 1. 1
PORT	0 0 8 0

There are three options for NETWORK TYPE: STATIC, DHCP and PPPoE. Select one of the network type by pressing the button “+” or “-”, and press “ENTER” to go to the submenu for further setup.

NETWORK TYPE: STATIC

After selecting STATIC as the network type, press “ENTER” and you will see a setup screen as follows. Enter IP, GATEWAY and NETMASK information needed in the DVR by using the button “+” or “-”. Press “MENU” again to finish the setup.

STATIC	
IP	60. 121. 46. 236
GATEWAY	60. 121. 46. 226
NETMASK	255. 255. 255. 254

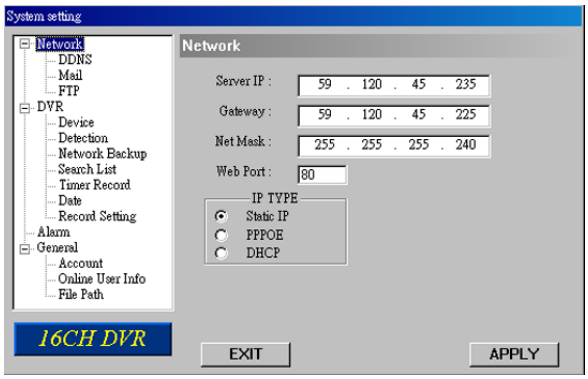
NETWORK TYPE: DHCP and PPPoE

For DHCP and PPPoE settings, it’s recommended to set directly via the licensed AP interface because more detailed information has to be set via this interface. Please see P.9 for more details.

You also need to apply DDNS service to get a “Hostname” before using DHCP and PPPoE network services. Please see at P.9 for more details.

◆ Via Licensed AP

Choose the icon (SYSTEM CONFIG) from the top control panel, and "System setting" window will be shown. Choose "Network" and you will see the screens from 1 to 3 on the right hand side for different setting.

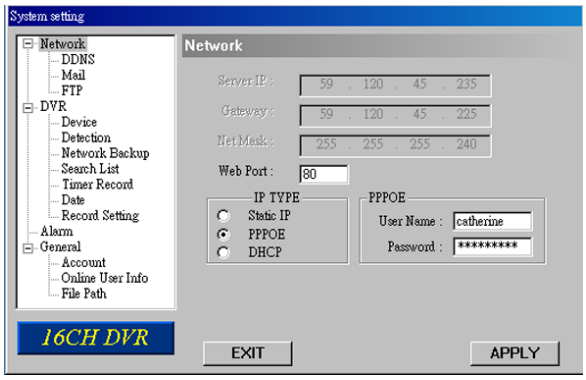


1. Static IP setup

1. Static IP setup

Select "Static IP" from "IP TYPE" section, and enter "Server IP", "Gateway", "Net Mask" and "Web Port" (80~19999) information.

Press "APPLY" to confirm and finish the settings.

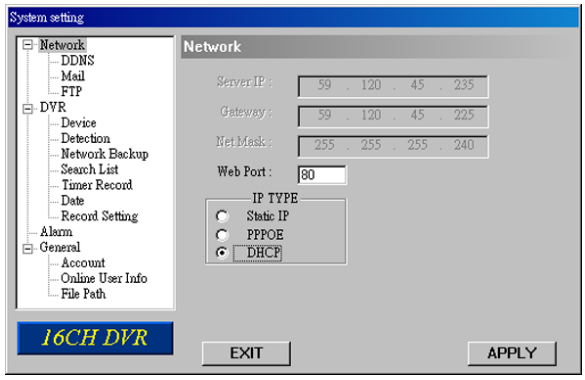


2. PPPOE setup

2. PPPOE setup

Select "PPPOE" from "IP TYPE" section. Enter "User Name" and "Password" information provided by your ISP (Internet Service Provider) supplier, and type "Web Port" information (80~19999).

Press "APPLY" to confirm and finish the settings. Then, go to "Network" → "DDNS" for further setup (See 4. DDNS setup).



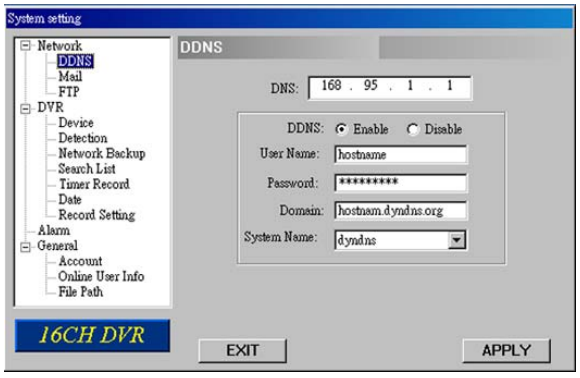
3. DHCP setup

3. DHCP setup

Select "DHCP" from "IP TYPE" section, and enter "Web Port" information (80~19999). Your router or cable modem network needs to support DHCP function.

Press "APPLY" to confirm and finish the settings. Then, go to "Network" → "DDNS" for further setup (See 4. DDNS setup).

NOTE: Some router brands may require to restart your DVR to get the IP address.



4. DDNS setup

4. DDNS setup

Go to "Network" → "DDNS".

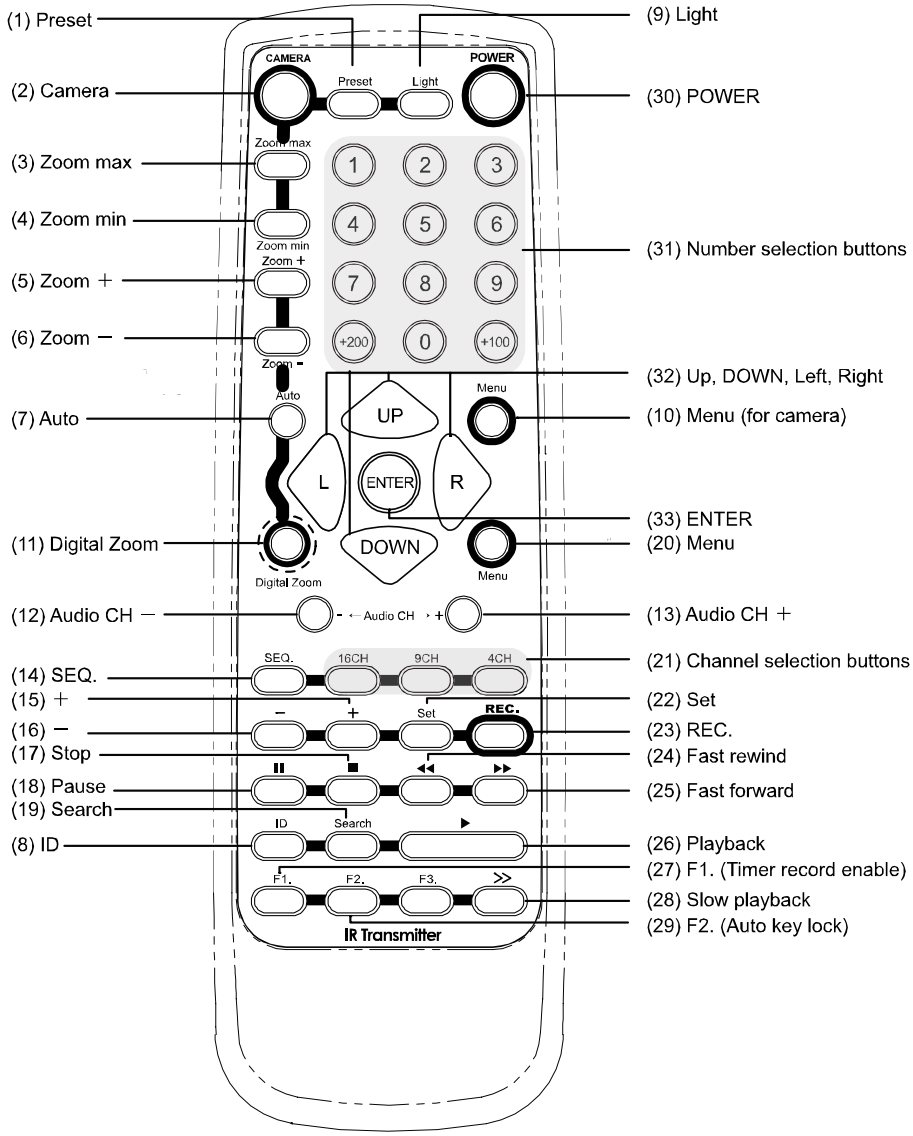
To configure DDNS setup, please go to a website (Ex: www.dyndns.org) which provides free DDNS service and **get a "Hostname" first**. For details, please check "DDNS APPLY EXAMPLE" at P.38 in your user's manual.

Enter "User Name", Ppassword" and "Domain" information, and select your DDNS system name from "System Name" drop-down menu.

NOTE: When "AUTO" check box is selected, the system will automatically get DNS information from the Internet.

8 IR Transmitter :

- ∗ IR control for PTZ camera, DVR, and remote switch
- ∗ IR emission distance: straight line is 10m; transmit at left and right 22.5° is 8m
- ∗ Control up to 255 PTZ cameras and remote switch
- ∗ Enabling different ID
- ∗ Current consumption: AAA size battery × 2

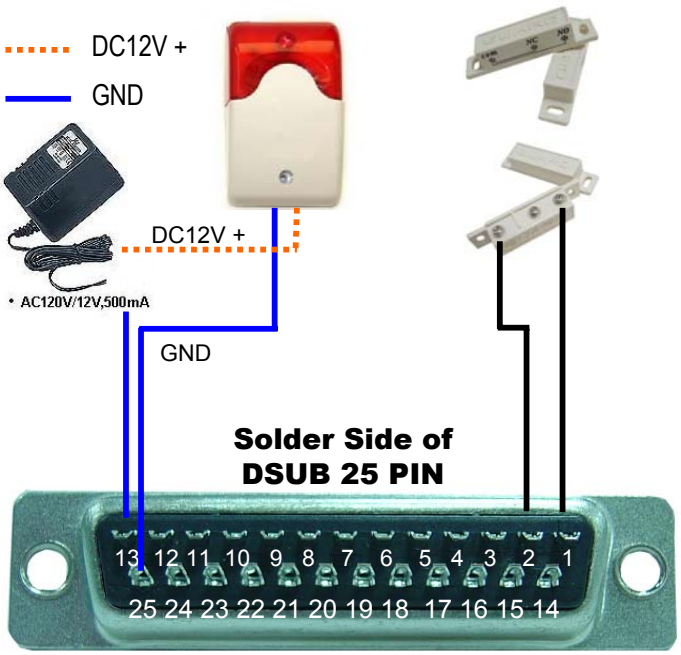


- ∗ CAMERA control buttons: Button (1) to (10). (button (9) is used for controlling the switch)
- ∗ DVR control buttons: Button (11) to (29).
- ∗ OTHER control buttons: Button (30) to (33) (Support controlling both CAMERA & DVR).
- ∗ F3 is a dummy button.

9 PIN Connection

- **16CH / 8CH**
- **16CH (D) / 8CH (D)**

PIN	FUNCTION	DESCRIPTION
1	GND	GROUND
2~9	ALARM INPUT	When connecting the wire from ALARM INPUT (PIN 2 -- 9) to GND (PIN 1) connector, DVR will start recording and the buzzer will be on. When “MENU -> CAMERA -> ALARM” is set to “Low” : When the alarm input signal is “ Low ”, the unit starts to record and buzzer. When “MENU -> CAMERA -> ALARM” is set to “High” : When the alarm input signal is “ High ”, the unit starts to record and buzzer.
10	PIN OFF	
11	TXD232	DVR can be controlled remotely by the keyboard of PC by using RS-232 serial communication signals.
12	RS485-A	DVR can be controlled remotely by the keyboard of PC by using RS-485 serial communication signals.
13	EXTERNAL ALARM NO.	Under the normal operation, COM disconnects with NO. But when any alarm is triggered, COM connects with NO. Attention: The voltage restriction is under AV/DC 30V.
14	PIN OFF	
15~22	ALARM INPUT	When connecting the wire from ALARM INPUT (PIN 15 -- 22) to GND (PIN 1) connector, DVR will start recording and the buzzer will be on. When “MENU -> CAMERA -> ALARM” is set to “Low” : When the alarm input signal is “ Low ”, the unit starts to record and buzzer. When “MENU -> CAMERA -> ALARM” is set to “High” : When the alarm input signal is “ High ”, the unit starts to record and buzzer.
23	RXD232	DVR can be controlled remotely by the keyboard of PC by using RS-232 serial communication signals.
24	RS485-B	DVR can be controlled remotely by the keyboard of PC by using RS-485 serial communication signals.
25	EXTERNAL ALARM COM	Under the normal operation, COM disconnects with NO. But when any alarm is triggered, COM connects with NO. Attention: The voltage restriction is under AV/DC 30V.



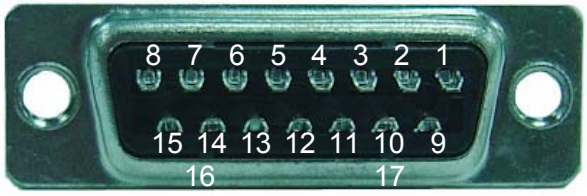
PIN Connection Application

When the magnetic contact is opened, the alarm will be triggered and the recording is on. At the same time, COM connects with NO and the siren with strobe starts wailing and flashing.

NOTE: Please go to MENU -> ADVANCE -> DETECTION -> DETECTION SETUP, and set ALARM to LOW on the local machine.

- **4CH / 4CH (D)**

Solder Side of DSUB 15 PIN



PIN	FUNCTION	DESCRIPTION
1	RS232-TX	DVR can be controlled remotely by the keyboard of PC by using RS-232 serial communication signals.
2	RS232-RX	DVR can be controlled remotely by the keyboard of PC by using RS-232 serial communication signals.
3~6	ALARM INPUT	To connect the wire from ALARM INPUT (PIN 3 -- 6) to GND (PIN 9) connector, DVR will start recording and the buzzer will be on. When “MENU -> CAMERA -> ALARM” is set to “Low” : When the alarm input signal is “ Low ”, the unit starts to record and buzzer. When “MENU -> CAMERA -> ALARM” is set to “High” : When the alarm input signal is “ High ”, the unit starts to record and buzzer.
7	EXTERNAL ALARM NC	Under the normal operation, COM connects with NC and disconnects from NO. But when any alarm is triggered, COM disconnects with NC and connects with NO. Attention: The voltage restriction is under AV/DC 30V.
8	EXTERNAL ALARM NO.	Under the normal operation, COM disconnects with NO. But when any alarm is triggered, COM connects with NO. Attention: The voltage restriction is under AV/DC 30V.
9	GND	Signal GND.
10	RS485-B	DVR can be controlled remotely by the keyboard of PC by using RS-485 serial communication signals.
11	RS485-A	DVR can be controlled remotely by the keyboard of PC by using RS-485 serial communication signals.
12~13	PIN OFF	
14	ALARM RESET	Connecting the wire from ALARM RESET (PIN 14) to GND (PIN 9) connector will disable alarms. An external signal to ALARM RESET (PIN 14) can be used to reset both ALARM OUTPUT signal and DVR’s internal buzzer. When any alarm has been triggered, the signal becomes “Low”, and all alarm activities will be stopped. Under the normal operation, the signal remains “High”.
15	EXTERNAL ALARM COM	Under the normal operation, COM disconnects with NO. But when any alarm is triggered, COM connects with NO. Attention: The voltage restriction is under AV/DC 30V.
16~17	GND	Earth GND